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Jiang et al.

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(54) **TRANSPARENT GROUP III METAL NITRIDE
AND METHOD OF MANUFACTURE**

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(58) **Field of Classification Search**

None

See application file for complete search history.

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(57) **ABSTRACT**

Large-area, low-cost single crystal transparent gallium-con-
taining nitride crystals useful as substrates for fabricating
GaN devices for electronic and/or optoelectronic applica-
tions are disclosed. The gallium-containing nitride crystals
are formed by controlling impurity concentrations during
ammonothermal growth and processing to control the rela-
tive concentrations of point defect species.

22 Claims, 10 Drawing Sheets

